Compared to What? A Meta-Analysis of Batterer Intervention Studies Using Nontreated Controls or Comparisons

Shih-Ying Cheng¹, Maxine Davis², Melissa Jonson-Reid¹, and Lauren Yaeger³

Abstract
This meta-analysis updates the literature on the effectiveness of batterer intervention programs (BIPs) in decreasing recidivism of domestic violence (DV) by focusing on studies with nontreated comparison groups (N = 17). Included studies were published between 1986 and 2016, and 14 of the 17 provided sufficient information for the meta-analysis. Analysis focused on three reported outcomes: DV recidivism reported by the criminal justice system, intimate partner violence (IPV) perpetration assessed by the survivor, and general offense recidivism reported by the criminal justice system. Results of meta-analysis indicated that BIPs were effective in decreasing DV recidivism and general offense recidivism when reported by the criminal justice system, but not when assessed by the survivor. BIP participants were about 3 times less likely to have DV recidivism and about 2.5 times less likely to have general offense recidivism, compared to nontreated control/comparison groups. The pooled effect size varied, however, by research design. Specifically, results indicated a nonsignificant pooled effect size for randomized controlled trials but a significant pooled effect size for quasi-experimental design studies. Implications for future practice and research are discussed.

Keywords
program evaluation, batterer intervention program, intimate partner violence, domestic violence, meta-analysis

Intimate partner violence (IPV) and abuse¹ is a significant social and public health problem in the United States. According to the 2010–2012 National Intimate Partner and Sexual Violence Survey, the lifetime prevalence estimate of IPV victimization among women and men is 37.3% and 30.9%, respectively (Smith et al., 2017). Harm due to IPV ranges from lost productivity and/or medical care related to emotional or physical injury to death. In 2015, on average, three individuals were murdered every day by their intimate partner in the United States (Federal Bureau of Investigation, 2017).

There has been a strong emphasis on increasing the criminal justice system’s responses to IPV perpetration and intervening with perpetrators (Goodmark, 2012, 2018). The criminalization of IPV has developed along three tracks: criminal punishment to deter battering, court-mandated batterer treatment, and restraining orders designed to protect victims through the threat of civil or criminal legal sanctions (Fagan, 1996). A typical criminal justice–involved IPV case usually begins with intervention by police. This may or may not be followed by arrest, filling and granting of a protective order, and prosecution on initial criminal charges and/or on violation of the protective order. If the perpetrator is found guilty, they are often sentenced to a batterer intervention program (BIP). The goal of the BIP is to transform IPV aggressor behaviors, thereby decreasing future IPV perpetration.

An Overview of BIPs in the United States
BIPs have existed since the late 1970s, but their use increased dramatically in the following decade (Adams, 2009). As implementation of mandatory domestic violence (DV) arrest laws and subsequent prosecution and conviction increased during the 1980s, court referral to BIPs became a common strategy for sentencing in lieu of incarceration and/or as a condition of probation (Dalton, 2007; Hanna, 1998). Although some BIPs in the United States also accept voluntary participants (Austin & Dankwart, 1998; Dalton, 2007), most BIP participants enter treatment because of court mandate (Dalton, 2007), with the vast majority of participants being men (Cannon, Hamel, Buttell, & Ferreira, 2016).

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In order to better understand the state of the more than 2,500 BIPs in operation across the United States, national surveys have been conducted over the past 15 years. Upon surveying BIP directors (N = 150) across 35 states, Dalton (2007) found commonalities regarding referral sources and screening processes. The most commonly cited source of client referrals was the judicial system with 98.7% (n = 148) accepting referrals via court order or court diversion, probation, parole, and/or youth corrections; 74% (n = 111) accepting Department of Social Service referrals; and 76.6% (n = 114) accepting voluntary referrals. The study also highlighted that most BIPs (90%) do not provide treatment based on clients’ specific needs and instead implement the same service for all referrals. Similar to prior studies (Austin & Dankwort, 1999; Maiuro, Hagar, Lin, & Olson, 2001), Cannon, Hamel, Buttell, and Ferreira (2016) found that most BIP treatment provided was group based (97.3%), and the vast majority were not trained to serve sexual and gender minority populations. Although commonalities exist, national surveys have reported considerable variation among BIP programs as well. Regarding treatment modalities, Price & Rosenbaum (2009; N = 276) found that 53% of BIPs stated that their philosophy was based at least partially on the Duluth model, 49% endorsed cognitive behavioral treatment, and 26% self-defined as implementing a “therapeutic” modality. Cannon and colleagues (2016) reported that slightly less than half of programs provide a trauma-informed approach (48.4%).

**Effectiveness of BIPs**

Given the wide variety of BIPs implemented throughout the United States, it is perhaps unsurprising that effectiveness studies over the years have reached conflicting conclusions (Eckhardt et al., 2013; Feder & Wilson, 2005). Some studies have indicated that program involvement reduces participants’ abusive behaviors, improves attitudes that are negatively associated with violence (Crockett, Kneski, Yeager, & Loving, 2015), or reduces reoffense (Bennett, Stoops, Call, & Flett, 2007). Yet, other studies have concluded that BIP participation has no effect at all on DV recidivism (Feder & Dugan, 2002). Furthermore, the study designs employed in previous research have varied, making synthesis across studies difficult.

A number of scholars have published reviews or meta-analyses with varying parameters for study inclusion (Arias, Arce, & Vilarinò, 2013; R. C. Davis & Taylor, 1999; Eckhardt et al., 2013; Murphy & Ting, 2010). Meta-analysis allows investigators to combine study results by using statistical methods to analyze and summarize the effect sizes of interventions. The results of these studies suggest that BIPs have little or no “program effect.”

Babcock, Green, and Robie (2004) conducted a meta-analysis of 22 studies evaluating BIP efficacy. Inclusion criteria were the presence of some form of comparison group for batterers and reliance on victim report or police record as the measure of recidivism. Seventeen of the included studies used nonequivalent comparison group designs, and most studies compared treatment completers to those who dropped out of treatment. Results indicated that effects of BIP treatment on reducing recidivism were quite small. Additionally, they found no differences in effect sizes between treatment models (i.e., Duluth model vs. cognitive-behavioral therapy [CBT] type interventions).

Focusing exclusively on court-mandated BIP participants, Feder and Wilson (2005) conducted a meta-analysis of 10 BIP studies that fit the following criteria: (1) the study used an experimental or rigorous quasi-experimental design, (2) the intervention involved a postarrest court-mandated intervention with a goal of decreasing reassault, and (3) the study reported sufficient data to permit computation of an effect size. Results indicated a modest mean effect for official reports of repeat IPV from experimental studies, whereas the mean effect for victim reported outcomes was zero. Quasi-experimental studies using a no-treatment comparison showed inconsistent findings resulting in an overall small harmful effect, whereas quasi-experimental studies using a treatment dropout comparison had a large, positive mean effect on IPV outcomes.

In a more recent quantitative review of BIPs from 1974 to 2013, Arias, Arce, and Vilarinò (2013) reviewed 19 studies from Spanish and English authors using the following criteria: (1) reported sample size, (2) reported recidivism rate for treatment completers, and (3) recidivism measured by official reports (e.g., police, court). Their review found that overall BIPs had a nonsignificant positive effect on reducing recidivism.

Systematic review and meta-analysis allow an objective appraisal of the evidence and thus enhance the precision of estimates of treatment effects (Egger, Davey-Smith, & Altman, 2008). Up-to-date meta-analyses are important for clinicians and researchers to keep up with emerging evidence (Beller, Chen, Wang, & Glasziou, 2013). Unfortunately, most studies employing meta-analysis to examine the effectiveness of BIPs were conducted more than 10 years ago, and several new studies have emerged since then. Reviews for BIPs are published less often than other intervention research areas (Ioannidis, 2016). Recommendations for intervention reviews suggest either updating reviews at least every 2 years or publishing a commentary explaining why an update is not needed (Higgins, Green, & Scholten, 2008). This article is responsive to this recommendation and provides an updated meta-analysis of BIP.

**The Current Review**

To avoid issues generated from methodological design challenges in evaluating BIPs and increase validity of the current meta-analysis (Gondolf, 2004), this meta-analysis focuses exclusively on published studies using a nontreated comparison group. In other words, studies using a treatment dropout comparison or lacking a comparison group were excluded. This is to avoid the possibility that differences in outcomes are due to maturation effects or fundamental differences in the treated and treatment dropout individuals. The current meta-analysis also
explored heterogeneity of outcomes based on whether or not a randomized control trial (RCT) was employed and the type of recidivism measure.

**Method**

**Eligibility Criteria**

As mentioned above, the current review includes only published studies that compared outcomes between treated (for IPV perpetration through a BIP) and nontreated comparison groups using either an RCT or a quasi-experimental design. Studies that used single group, pretest–posttest design, compared outcomes from various BIP treatment models, or compared outcomes among those who completed the treatment to the outcomes among those who dropped out were excluded. Studies conducted outside the United States and Canada or not written in English were also excluded.

**Search Protocol and Study Selection**

Search strategies and terms were developed and selected according to key words used in prior reviews and common terms in the recent literature: DV or IPV perpetrators, BIPs, and recidivism or reassault (please see Appendix for more details). Controlled vocabulary terms and key words were used to search Embase 1947–, SCOPUS 1823–, Academic Search Complete 1887–, PsychINFO 1800s–, Social Work Abstracts 1965–, and Global Health 1973–. Bibliographies of the following reviews were also examined: Babcock et al. (2004), Feder and Wilson (2005), and Arias et al. (2013). All searches were completed on March 15, 2019. Results were combined and de-duplicated in endnote to yield a total of 789 unique studies. Studies that did not fit the eligibility criteria were dropped. The final sample included 17 studies assessing BIP effectiveness in IPV recidivism (see Figure 1 for details).

**Data Extraction and Collection**

Information extracted from the studies identified included descriptions of 17 included studies, BIPs, research designs, and effect sizes. A total of 185 effect sizes relevant to actual recidivism were identified. Over half (54.6%, n = 101) of these 185 effect sizes lacked information for further meta-analysis. Authors of 12 studies that lacked information for meta-analysis were contacted and asked to provide the required information (e.g., standard deviation for outcome). Authors who did not respond to initial e-mails were contacted at least 2 more times. Two authors (16.7%) responded that they had disposed of the data, and therefore, they could not provide information requested. Four authors (33.3%) provided information requested. The remainder did not reply. Information provided by authors allowed 16 additional effect sizes to be used, making the total analyzable effect sizes 85.

**Data Management and Analysis**

**Outcome measures.** The current study looked at the decrease in DV perpetration behaviors instead of attitude changes alone. Outcome measures included DV-related violation of probation, convictions related to repeat DV, arrest related to DV, charges related to DV, and/or IPV captured by the Conflict Tactics Scales (CTS; Straus, 1979), revised CTS (Straus, Hamby,
Boney-McCoy, & Sugarman, 1996), or revision of the CTS (Harrell, 1991) reported by the survivor. Three outcome measures were used to conduct the meta-analysis. Analysis I analyzed DV recidivism reported by the criminal justice system (e.g., police, probation office, court). Analysis II analyzed IPV perpetration reported by the survivor. Analysis III analyzed general offense recidivism (e.g., any new charges, any new rearrests) reported by the criminal justice system (e.g., police, probation office, court). Of the 85 analyzable effect sizes, 23 effect sizes were excluded because they did not belong to the three target outcome measures.

**Analysis approach.** The software Stata 15 and the package meta were used to conduct meta-analysis using available estimated effect sizes. The pooled odds ratios (ORs) for DV recidivism or IPV perpetration were calculated. Multiple effect sizes relevant to the same construct from the same study were identified due to the outcome measures (e.g., assault, aggravated assault), follow-up duration, and so on. A terminate effect size per study, per construct is needed for meta-analysis to avoid violation of the independence assumption (Egger et al., 2008; Lipsey & Wilson, 2001). Authors considered three recommended approaches to determine the terminate effect size: (1) randomly select one effect size, (2) select one effect size based on criteria for identifying the best available effect, or (3) average the multiple effect sizes into a single mean value (Lipsey & Wilson, 2001). Considering the small number of studies and wanting to avoid researcher bias in selection of effects, the current study adopted the average value approach. In total, information from 73 identified effect sizes was used in the meta-analysis as “intermediate effect sizes.” The number of terminate effect sizes used in the meta-analysis was 12, 3, and 7, respectively. The authors selected one effect size per study, per construct, based on the operationalization of interest (i.e., Approach 2). Results using these two approaches were very similar. The “zero-cells” issue (i.e., no recidivism in either the treatment or control/comparison) occurred for one terminate effect size. The log risk ratio for meta-regression was calculated, following suggestions from Sterne, Bradburn, and Egger (2001; i.e., adding 0.5 to each cell of the 2 × 2 table for the trial).

The use of the random-effects versus fixed-effects model was guided by the heterogeneity statistics Q and I² and by examining whether the analytic studies violated the assumptions of the fixed-effects model (i.e., there is one true effect size that underlies the included effects; Borenstein, Hedges, Higgins, & Rothstein, 2010; Sterne, Bradburn, & Egger, 2001). The random-effects model is suggested if the heterogeneity analysis reveals a significant (p < .05) Q statistic and a substantial I² statistic (Lipsey & Wilson, 2001; Sterne et al., 2001). Among the three meta-analyses, Analyses I and III used the random-effects (DerSimonian and Liard) model, and Analysis II used the fixed-effects (Mantel–Haenszel method) model (Deeks, Altman, & Bradburn, 2001). To further investigate the source of the heterogeneity in the estimated pooled effect sizes, meta-regression was also conducted.

**Results**

**Overview**

Among the 17 included studies, over half (n = 10, 58.8%) of the studies used CBT, psychoeducation, and/or the Duluth model. Other models implemented included the holistic model (n = 1, 5.8%) and the risk, needs, and responsivity (RNR) model (n = 1, 5.8%). The remaining studies did not specify the treatment model adopted. See Table 1 for more details.

A wide range of research designs, outcome measures, and analysis approaches were used among the included studies. Less than one third (n = 5, 29.4%) of included studies used an RCT. The remainder of the studies used a quasi-experimental design (n = 12, 70.6%). Among those studies that did not conduct an RCT, some employed statistical techniques (e.g., propensity score matching) as a mechanism for establishing some degree of equality between the treated group and the comparison group.

Fewer than half of the included studies (n = 8, 47.1%) concluded that BIPs were effective in decreasing IPV. Two studies (11.8%) had mixed findings. Chen, Bersani, Myers, and Denton (1989) found that only those defendants who attended 75% or more of the treatment sessions had decreased recidivism. Boots, Wareham, Bartula, and Canas (2016) indicated that the BIP was more effective than jail or regular dismissal in reducing the likelihood of future arrests, but not more effective than plea-deferred adjudication and conditional dismissal. The remaining seven studies (41.2%) did not find a significant difference in subsequent IPV perpetration between the BIP and no-treatment groups. Detailed information for each included study can be seen in Table 2.

**Meta-Analysis**

The current meta-analysis was conducted for 14 of the 17 studies. Three studies meeting inclusion criteria (Chen, Bersani, Myers, & Denton, 1989; Gordon & Moriarty, 2003; Richards, Jennings, Tomsich, & Gover, 2014) did not have sufficient information for meta-analysis.

**Analysis I: DV recidivism reported by the criminal justice system.** Twelve studies (seven non-RCTs and five RCTs) were included in Analysis I. Results of the random-effects model (I² = 83.6%; Q = 54.5, p < .001) using DV recidivism reported by the criminal justice system as the outcome measure indicated that BIPs were effective in decreasing the odds of DV recidivism (pooled OR = 31, p < .001). The treated individuals were about 3 times less likely to have DV recidivism, compared to individuals in the control or comparison groups. The results, however, varied by research design. The pooled OR was nonsignificant for RCT studies (pooled OR = .74, p = .140) but was significant for non-RCT studies (pooled OR = .15, p < .001; see Figure 2). The results from the meta-regression revealed that the log risk ratio is estimated to increase by 1.02 unit (p < .05) in the RCT studies, suggesting that RCT studies were less likely to have a significant pooled
<table>
<thead>
<tr>
<th>Model</th>
<th>Cognitive Behavior Therapy</th>
<th>Education/Psychoeducation</th>
<th>Duluth</th>
<th>Holistic</th>
<th>Risk, Needs, and Responsivity</th>
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<tbody>
<tr>
<td></td>
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<td>Labriola, Rempel, and Davis (2008)</td>
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<tr>
<td>Examples of program content and goals</td>
<td>Cognitive behavior modification</td>
<td>Understand violence and its consequences</td>
<td>Understand the definition of DV</td>
<td>Regular drug and alcohol tests</td>
<td>Targeted toward DV offenders assessed as being at higher risk of reoffending</td>
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<td></td>
<td>Anger management and modification</td>
<td>Take responsibility for violent behavior</td>
<td>Understand the historical and cultural aspects of DV</td>
<td>Maintain gainful employment</td>
<td>Focused on immediate, practical actions that could be taken to reduce dynamic risk of reoffending</td>
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<td></td>
<td>Perpetrator attitudes and values regarding women and violence toward women</td>
<td>Cope with conflict and anger</td>
<td>Power and control tactics</td>
<td>Counseling</td>
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<td></td>
<td>Empathy enhancement</td>
<td>Self-esteem and male role expectations</td>
<td>Alternative strategies to violence</td>
<td>Job skill training</td>
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<td></td>
<td>Communication skills</td>
<td>Relationships with women</td>
<td>Anger management</td>
<td>Parenting classes</td>
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<td></td>
<td>Personal responsibility and accountability for violence prevention</td>
<td>Stress reduction</td>
<td>Take responsibility for one’s behavior</td>
<td>Substance abuse programs</td>
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<td></td>
<td>Issues of power and control</td>
<td>Avoidance techniques as a means to exit from escalating interactions</td>
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<td></td>
<td>Equality in intimate relationships</td>
<td>Expressive skills</td>
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<td>Empathic skills</td>
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<td>Role switching skills</td>
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Note. $N = 17$. Four studies (Gordon & Moriarty, 2003; Murphy, Musser, & Maton, 1998; Richards, Jennings, Tomsich, & Gover, 2014; Syers & Edleson, 1992) did not specify the treatment model adopted. One study (Boots, Wareham, Bartula, & Canas, 2016) could not determine the model, as it may have varied per BIP site. BIP = batterer intervention program; DV = domestic violence.
Table 2. A Summary of the Included Studies.

<table>
<thead>
<tr>
<th>Studies</th>
<th>Sample Description</th>
<th>RCT</th>
<th>Group Assignment</th>
<th>Measures</th>
<th>Time Frame</th>
<th>Findings</th>
</tr>
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<tbody>
<tr>
<td>Dutton (1986)</td>
<td>Both the treated (n = 50) and untreated (n = 50) men in this study were convicted of wife assault and had similar histories of assault</td>
<td>No</td>
<td>The decision to include men in treatment was made primarily by their probation officer and secondarily by a therapist. Considerations for the group assignment included issues such as whether a convicted man had employment that made the treatment location accessible, whether probations order expired before a space in the treatment group was available, and the man's willingness to participate.</td>
<td>DV recidivism and DV-related aggravated assault reported by the police. CTS scores reported by men and their wives.</td>
<td>2.5 years (prospective)</td>
<td>The treatment was effective in decreasing post conviction recidivism rates by comparing the treated and untreated men. The CTS scores reported both by the treated men and their wives also demonstrated significant posttreatment decreases from pretreatment levels.</td>
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<tr>
<td>Waldo (1988)</td>
<td>Participants were men arrested for assault or battery of their wives or female cohabitants (n = 154)</td>
<td>No</td>
<td>Of the 154 men, 46 were referred to a crisis center and treated for wife abuse, 49 were also referred but they decided not to participate in the BIP, and the remaining 59 men were not referred for treatment because many court members were unfamiliar with the program. This study randomly selected 30 men from each of the three conditions resulting in a treatment group of 30 men and two comparison groups of 30 men for each condition.</td>
<td>Subsequent DV-related arrest reported by the court.</td>
<td>1 year (retrospective)</td>
<td>BIP was effective in decreasing recidivism for men who had been arrested for DV.</td>
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<tr>
<td>Chen, Bersani, Myers, and Denton (1989)</td>
<td>Individuals in the treatment group (n = 120) and the comparison group (n = 101) were convicted male batterers</td>
<td>No</td>
<td>Men in the treated group were referred to the program by six municipal court judges. The comparison group was created via a systematic sampling from the Crime Index (i.e., a yearly court record from the municipal court). Individuals in the comparison group were proportionately matched to that of the convicted batterers in the treatment group for each year studied. The treatment variable in the analysis was replaced by an instrumental variable that indicated the probability of being assigned to the treatment group to deal with selection bias.</td>
<td>Subsequent charges (DV related, violence related, nonviolence related) reported by the court. (Retrospective)</td>
<td></td>
<td>Only those defendants who attended 75% of the treatment sessions or more had decreased recidivism; others showed no impact. An alternative interpretation of the findings was that the participants in the group attending 75% or more sessions were less violence prone and more motivated to change.</td>
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<tr>
<td>Palmer, Brown, and Barrera (1992)</td>
<td>Participants (n = 59) were men who had been convicted of wife abuse, placed on probation and court mandated to participate in this project.</td>
<td>Yes</td>
<td>A control group was formed from the initial pool of subjects, using a block random procedure.</td>
<td>Physical abuse and serious threats to partners reported by the police, the abusive men, or the female partner.</td>
<td>2 years (prospective)</td>
<td>Recidivism rates, based on police reports, were lower than those for the control group of untreated abusive husbands. Recidivism was also lower for those men initially exhibiting greater depression.</td>
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<tr>
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<td>Syers and Edleson (1992)</td>
<td>The original sample included 358 unique incident reports from police interviews</td>
<td>No</td>
<td>Men were grouped into three categories representing the outcomes resulting from differing degrees of system intervention: (1) men who were not arrested following the incident, (2) men who were arrested but not court-ordered to BIP, and (3) men who were arrested and required to attend BIP as a condition of their sentence</td>
<td>Subsequent IPV reported by the victim and the criminal justice system (police and court)</td>
<td>6 and 12 months (prospective)</td>
<td>Analysis showed that those arrested and court-ordered to BIP were the least likely to repeat IPV, followed by those who were not arrested, and then by those who were arrested but not ordered to treatment. The differences were, however, not significant</td>
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<tr>
<td>Murphy, Musser, and Maton (1998)</td>
<td>The sample included 235 cases obtained from the files of a State Attorney's DV unit. Men who were charged with DV-related offenses constituted the sample</td>
<td>No</td>
<td>To assess the accumulative effects of prosecution, probation, and BIP, cases were grouped into the following categories: (1) not successfully persecuted, (2) guilty verdict/probation before judgment, (3) guilty verdict/probation before judgment plus probation, (4) all of the above plus ordered to BIP, (5) all of the above plus attended BIP intake, and (6) all of the above plus completed BIP</td>
<td>Battery charge, violation of civil order of protection, and any new charge reported by the police and court</td>
<td>12–18 months (retrospective)</td>
<td>Court orders for BIP were significantly associated with lower criminal recidivism for battery or violation of a civil order of protection</td>
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<td>Babcock and Steiner (1999)</td>
<td>Men (n = 355) who were arrested for a misdemeanor DV offense</td>
<td>No</td>
<td>Participants were mandated into DV group treatment exclusively, DV treatment plus chemical dependency treatment, chemical dependency treatment, or an alternative treatment (e.g., individual therapy)</td>
<td>DV-related offenses and non-DV-related violent offenses reported by the police</td>
<td>2 years (prospective)</td>
<td>Men who completed DV group treatment had fewer DV reoffenses at follow-up than noncompleters, after controlling for criminal record and demographics. The DV group completers had fewer DV reoffenses at follow-up than perpetrators who were incarcerated in lieu of treatment. The number of DV sessions attended was negatively correlated with recidivism</td>
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<td>Dunford (2000)</td>
<td>Married U.S. Navy couples (n = 861) in which husbands were substantiated as having physically assaulted their wives</td>
<td>Yes</td>
<td>The 861 couples were randomly assigned to four groups: a men’s group, a conjoint group, a rigorously monitored group, and a control group</td>
<td>Spousal abuse reported by the wife, the abusive husband, or the court</td>
<td>1.5 years (prospective)</td>
<td>Nonsignificant differences between the experimental groups over a variety of outcome measures</td>
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<td>Taylor, Davis, and Maxwell (2001)</td>
<td>Male criminal court defendants (n = 376) charged with assaulting their intimate female partners</td>
<td>Yes</td>
<td>Cases were assigned randomly to a 40-hr BIP or to 40 hr of community service (e.g., help clean local parks and public buildings) without batterer education or treatment groups</td>
<td>Subsequent DV-related arrest and crime complaints reported by the police; subsequent IPV (Revised CTS) reported by the female partner</td>
<td>6 and 12 months (prospective)</td>
<td>Men in the treatment group showed significantly lower recidivism from official records than the control group. Victims' reports also recorded fewer failures among the treated batterers. The differences in the failure rates, however, were not significant. Overall, BIP may reduce DV among convicted batterers</td>
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<th>Studies</th>
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<tbody>
<tr>
<td>Feder and Dugan (2002)</td>
<td>Participants were men (n = 404) who were convicted of misdemeanor DV</td>
<td>Yes</td>
<td>All 404 male defendants were randomly assigned into an experimental (1-year probation and court-mandated counseling) or control (1-year probation only) conditions</td>
<td>Subsequent IPV (Revised CTS) reported by the male abuser and the female partner; rearrest reported by the probation office</td>
<td>6 and 12 months (prospective)</td>
<td>No significant differences were found between the experimental and control groups in their rates of rearrest and subsequent DV. Further analyses indicated that stake-in-conformity variables (e.g., employment, age) predicted BIP attendance and reoffending.</td>
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<td>Gordon and Moriarty (2003)</td>
<td>Male DV offenders (N = 248) sentenced to community correction services, which allows DV offenders to reside in the community under criminal justice supervision</td>
<td>No</td>
<td>A portion of these offenders (n = 132) were court-ordered to attend DV treatment. Those sentenced to community correction services with no mandatory DV treatment comprised the nonequivalent comparison group</td>
<td>Rearrest and reconviction reported by the court</td>
<td>12 months (retrospective)</td>
<td>Analysis revealed no significant difference between the DV treatment group and the nontreatment group. By comparing treatment completers to those who started but dropped out of treatment, further analysis showed that successful completion of all treatment sessions was associated with a decreased likelihood of DV rearrest and reconviction among those who received treatment.</td>
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<tr>
<td>Labriola, Rempel, and Davis (2008)</td>
<td>Convicted male DV offenders (N = 420)</td>
<td>Yes</td>
<td>Convicted male DV offenders were randomly assigned to one of four experimental conditions: (1) batterer program plus monthly judicial monitoring, (2) batterer program plus graduated monitoring, (3) monthly monitoring only, and (4) graduated monitoring only</td>
<td>Subsequent arrest, criminal contempt arrest, and DV-related arrest reported by the court; subsequent IPV (CTS) reported by the female partner</td>
<td>12 and 18 months (prospective)</td>
<td>Neither the BIP nor either of the two monitoring schedules produced a reduction in official rearrest rates for any offense, for DV, or for DV with the same victim. Victims expressed greater satisfaction with the sentence when a BIP was assigned.</td>
</tr>
<tr>
<td>Pitts, Givens, and McNeeley (2009)</td>
<td>Adult men offenders served by the BIP (n = 100) and male offenders who are matched to the participation in the BIP (n = 100)</td>
<td>No</td>
<td>Individuals in the comparison group were retrospectively selected to match the treated offenders by using one-to-one matching on demographic characteristics (e.g., race/ethnicity, whether the participant was English-speaking). There are no data regarding what treatment the comparison participants received</td>
<td>Subsequent DV arrest, violent arrest, and criminal Offense reported by the court</td>
<td>2.5 years (retrospective)</td>
<td>BIP participants were significantly less likely to receive subsequent charges for DV, other violent offenses, or any other criminal offense. Even unsuccessful participants (i.e., offenders who attended less than 6 months of the 12-month BIP and were discharged unsuccessfully) had fewer incidents of recidivism than offenders who did not participate.</td>
</tr>
<tr>
<td>Richards, Jennings, Tomsich, and Gover (2014)</td>
<td>Men who were arrested for DV in a specific calendar year (N = 286)</td>
<td>No</td>
<td>Individuals who participated in a BIP as a result of the study arrest were treated as the experimental group. Individuals who had not participated in a BIP as a result of the study arrest were treated as the comparison group</td>
<td>Time to rearrest for non-DV and DV offenses</td>
<td>10 years (retrospective)</td>
<td>Approximately half of DV offenders were rearrested fairly quickly (mean = 5.61 years for DV rearrest, 5.30 years for non-DV rearrest). BIP intervention was not associated with DV or non-DV rearrest. Risk factors associated with both types of rearrest included age (being younger), marriage (not married), and DV offense history.</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Studies</th>
<th>Sample Description</th>
<th>RCT</th>
<th>Group Assignment</th>
<th>Measures</th>
<th>Time Frame</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott, Heslop, Kelly, and Wiggins (2015)</td>
<td>Male offenders (n = 80) deemed at moderate to high risk of reoffending and who remained in the community</td>
<td>No</td>
<td>Among 229 men who met study eligibility criteria, direct phone contact was successfully made with 63. Upon personal invitation, 76% of the 63 men contacted agreed to participate (n = 48). Of the 48 men who consented to the project, 40 attended at least one appointment and were considered the intervention group. To create a comparison group, 40 men were randomly selected from the other 166 eligible men who could not be contacted by police. 40 men attending a BIP and 40 men with equivalent levels of risk of reoffense who did not attend intervention.</td>
<td>DV-related charge, non-DV-related charges, violent offense, property offense, administrative offense reported by the police; police involvement (e.g., street checks, criminal investigation)</td>
<td>2 years (prospective)</td>
<td>Significant, substantial, and lasting differences between the intervention group and comparison group in all outcome domains</td>
</tr>
<tr>
<td>Mennicke, Tripodi, Veeh, Wilke, and Kennedy (2015)</td>
<td>Male offenders (n = 506)</td>
<td>No</td>
<td>The treated were offenders who completed the BIP and had been released for at least 1 year (n = 253). The comparison group was created by using a one-to-one propensity score mating function (n = 253). Data were obtained from information of prisoners (n = 182,337) provided by a correction department.</td>
<td>Reincarceration reported by prison</td>
<td>5 and 7 years (retrospective)</td>
<td>No significant differences in the 5- and 7-year reincarceration rates between the treatment and the comparison group</td>
</tr>
<tr>
<td>Boots, Wareham, Bartula, and Canas (2016)</td>
<td>405 unique IPV offender cases selected from 2,392 unique offender cases that were grouped as five classes (BIP, plea deferred, regular dismissed, conditional dismissal, and jail) The stratified sampling strategy was used in sample selection</td>
<td>No</td>
<td>The treated (n = 52) were BIP participants. The comparison groups were individuals with alternative sanctions including (1) plea deferred (n = 109), (2) regular dismissed (n = 99), (3) conditional dismissal (n = 100), and (4) jail (n = 54)</td>
<td>Subsequent arrest and DV-related arrest reported by court</td>
<td>12 months (retrospective)</td>
<td>BIP was more effective than jail or regular dismissal in reducing the likelihood of future arrests but not plea-deferred adjudication and conditional dismissal</td>
</tr>
</tbody>
</table>

Note. n = 17. RCT = randomized control trial; CTS = Conflict Tactics Scale; DV = domestic violence; BIP = batterer intervention program.
log risk ratio. Results also suggested that the research design reduced the between-study variance from 0.47 to 0.30.

**Analysis II: IPV perpetration assessed by the survivor.** Only three RCT studies were included in Analysis II. Results of the fixed-effects model ($I^2 = 0\%$; $Q = 52.8, p = .768$) using IPV perpetration reported by a female survivor as the outcome measure revealed an overall pooled result in the desired direction, but it was not significant (pooled $\text{OR} = .82, p = .296$; see Figure 3). Meta-regression was not performed for Analysis II because no RCT was included.

**Analysis III: General offense recidivism reported by the criminal justice system.** Seven studies (six non-RCT and one RCT) were included in Analysis III. Results of the random-effects model ($I^2 = 88.7\%; Q = 45.5, p < .001$) using general offense recidivism reported by the criminal justice system as the outcome measure indicated that BIPs were effective in decreasing the odds of general offense recidivism (pooled $\text{OR} = .39, p < .05$). The treated individuals were about 2.5 times less likely to have general offense recidivism, compared to individuals in the control and comparison groups. The results varied according to whether an RCT was used. The $\text{OR}$ was nonsignificant for the RCT ($\text{OR} = 1.14, p = .577$), and the pooled $\text{OR}$ was significant for non-RCT studies (pooled $\text{OR} = .32, p < .05$; see Figure 4). Meta-regression was not performed for Analysis III because only one RCT study was included.

**Discussion**

This review updates the prior meta-analyses with current studies limited to BIP studies that compared treatment participants to those receiving no treatment for IPV. The review was also able to include some information from studies that had not been included in prior meta-analyses due to obtaining needed data from the study authors. Similar to prior summative reviews, our results indicate that the effectiveness of BIPs is inconclusive (Arias et al., 2013; Babcock, Green, & Robie, 2004; Eckhardt et al., 2013; Feder & Wilson, 2005). Analyses also found no significant effect in decreasing IPV perpetration when measured by survivor report. It is possible that BIPs may reduce criminalized behavior but not abusive behavior, which can be defined more broadly.

A limitation of the present review is associated with the inclusion criteria. As noted in prior reviews, studies of BIPs continue to suffer from significant heterogeneity in sample size, treatment model, research design, outcome measures,
analytic approaches, follow-up duration, and data sources (Arias et al., 2013; Babcock et al., 2004; Eckhardt et al., 2013; Feder & Wilson, 2005). To avoid issues generated from methodological design challenges in evaluating BIPs, increase validity of the current meta-analysis, and to answer the basic question of whether the BIPs are effective in decreasing IPV or
not, the current analysis reviewed only published studies that included a nontreated control/comparison group. This decision led to excluding research evaluating some more novel trauma-informed interventions, as they compared outcomes to other treatment conditions (e.g., Taft, Macdonald, Creech, Monson, & Murphy, 2016). This decision prevented exploration of whether one BIP is more effective than another, or whether the effectiveness of BIP vary by type of perpetrator, or form of IPV.

Another limitation is the small number of studies eligible for meta-analysis by type of outcome. For example, only three studies using comparison or control groups included measures of IPV perpetration assessed by a survivor, meaning that the nonsignificant results should be interpreted with caution. Similarly, Analysis III (general offense recidivism reported by criminal justice system) included only one RCT, making it difficult to assess variation in this outcome by design in the meta-regression. There were also too few studies within the differing outcome groups to attempt to analyze outcomes by treatment modality. It is unknown whether the more promising results found in quasi-experimental studies are due to how the participants were assigned or some other uncontrolled factor. If an RCT is not feasible, it is critical for researchers to collect and provide sufficient information about the comparisons for further evaluation of findings (Dobash & Dobash, 2000). Using the most rigorous statistical methods to help equalize groups might be another approach to address this issue (Guo & Fraser, 2015).

**Implications for Practice, Policy, and Research**

It is important to note that BIP study outcomes primarily focused on physical violence and criminal recidivism. While this may be an artifact of the forms of violence that are criminalized in the United States, it leaves a significant gap in synthesizing our understanding of potential program effects on other forms of IPV such as emotional, psychological, economic, spiritual, and sexually abusive behaviors (Breiding, Basile, Smith, Black, & Mahendra, 2015; Postmus, Plummer, McMahon, Murshid, & Kim, 2011). Given that these other forms of IPV also cause significant harm, it is important that these outcomes be evaluated in future studies. It is also possible that other victim experiences in relation to BIP may impact longer term outcomes. Labriola, Rempel, and Davis (2008), for example, found that although BIPs were not associated with a decrease in IPV perpetration, victims expressed greater satisfaction with the sentence when a BIP was assigned. It is not known whether victim satisfaction may somehow lead to longer term positive outcomes or forms of IPV not measured in current studies.

Some researchers have also pointed out that lack of treatment completion or resistance to engagement among mandated participants may impact results (Taft, Murphy, Elliott, & Morrel, 2001). Feder and Dugan (2002) investigated factors related to BIP completion and found that stake-in-conformity variables (e.g., employment, age) predicted both BIP attendance and reoffending. Strategies that enhance motivation and readiness for change may hold promise in influencing treatment engagement and decreasing future abusive behaviors (Eckhardt et al., 2013). Scott, King, McGinn, and Hosseini (2011) investigated the efficacy of applying motivational enhancement on immediate outcomes of a BIP with a sample of male BIP participants classified as “resistant” based on a self-report screening measure. Results showed that compared to men attending standard BIP intervention (16 weeks), men attending specialized motivational enhancing group (6 weeks) followed by 10 weeks of standard intervention completed intervention at a significant higher rate. This study, however, did not find significant differences in counselor-rated success at meeting core treatment goals between the two groups. More studies are needed to explore whether such strategies are effective in enhancing program outcomes, and, what outcomes.

While there are many ways one can improve the study of existing BIPs, the continued inconsistent findings of commonly used models also suggest the need to look toward new approaches. Alternatives to the traditional model (e.g., Duluth, psychoeducation) have emerged in recent years. Many of these approaches deliver a tailored intervention based on personal needs of the client. The holistic model addresses IPV offenders’ lifestyle factors (e.g., unemployment, substance use) that may contribute to offenses (Pitts, Givens, & McNeely, 2009). Other approaches may target risk factors that have spillover effects for IPV perpetration. This may include addressing issues related to offenders’ substance abuse (Lila, Gracia, & Catalá-Miñana, 2017) and/or mental health including trauma (Miles-McLean et al., 2019). For example, some studies have identified a significant association between post-traumatic stress disorder (PTSD) symptoms and trauma history in men’s IPV perpetration. creech et al. (2017) found that PTSD symptoms at baseline predicted both physical and psychosocial IPV perpetration among a sample of male veterans, after controlling the effects of treatment condition, time, and number of sessions attended. Miles-McLean et al. (2019) found that men with higher levels of PTSD symptoms at baseline had lower treatment engagement (e.g., homework compliance, group cohesion) in a community-based IPV intervention program. While there has been some work comparing trauma-informed care to other treatment (Taft, Murphy, & Creech, 2016), there has been a call for greater attention in this area (Voith, Logan-Greene, Strothoff, & Bender, 2018), and future studies should further investigate how the changes occur, for example, whether PTSD symptoms mediate the relationship between a BIP intervention and men’s perpetration of IPV.

Other approaches include tailoring treatments to meet the needs of specific subtypes of violent perpetrators (Aaron & Beaulaurier, 2017; Carabajosa, Catalá-Miñana, Lila, & Gracia, 2017; Gómez, Rodríguez, Munoz-Rivas, & Montesino, 2017). The RNR model targets individuals at higher risk of reoffending (Scott, Heslop, Kelly, & Wiggins, 2015). There also remains interest in exploring conjoint (couple) treatment when safe to do so (Karakurt, Whiting, Van Esch, Bolen, & Calabrèse, 2016) or employing restorative justice methods (Mills,
Barocas, & Ariel, 2013; Stuart, Temple, & Moore, 2007). Among the novel intervention studies reviewed in the current study, only the holistic model and RNR model were able to be included, and these lacked sufficient studies to be able to compare effects to other approaches. More work needs to be done exploring alternative BIP approaches with specific subgroups to build our capacity to effectively address IPV.

It is also worth noting that almost all included studies specified that their participants were male, and representation of certain ethnic or racial groups such as Latino or Asian populations in research studies is relatively rare, especially when considering the need for culturally tailored services (M. Davis, 2018; M. Davis, Dahm, Jonson-Reid, Stoops, & Sabri, 2019; Parra-Cardona et al., 2013). This makes it impossible to know whether effects, when found, generalize to women or underrepresented ethnic/racial groups who have engaged in IPV. Future studies should attempt to replicate and extend research with more inclusive samples.

Given the significant societal, family, and individual impact of IPV, it is critical that we begin more systematic research on varying models of intervention and across populations. In order to provide adequate information to guide the field, it is important for investigators to report the details on services provided, effect sizes, and standard deviations to enable future meta-analyses. Researchers may consider providing supplemental data (which many journals accept in electronic format) to provide the data for later reviews when such data seem inappropriate to report for a specific paper. It is also important to consider the possible effects of a given study design on the outcome measured. The authors hope that this article will encourage future study that will inform practice in this area.

Appendix

Full Search Strategy

Embase
Initial Date Searched: February 17, 2017
Applied Database Supplied Limits: English
Number of Results: 223
Updated August 15, 2018, limits records added to Embase from original search date to present: AND [1-2-2017]/sd NOT [16-8-2018]/sd
Results 23

Full Search Strategy:

((assault OR abusive OR abuse) NEAR/4 (wife OR wives OR husband* OR spouse* OR partner*)) OR ‘partner violence’/exp OR (partner OR spouse) NEAR/3 (violence OR abus*) OR abuser* OR batterer* OR ‘offender’/exp OR offender* OR perpetrator* OR convict* OR criminal* AND (‘domestic violence’/exp OR ‘domestic violence’)) AND (((abuser OR batterer) NEAR/3 (treatment* OR program* OR group OR counseling OR intervention*) OR ‘community intervention program’ OR (batterer AND intervention NEAR/2 program*) OR bip: ti, ab OR ‘behavior therapy’/exp OR (behavior* OR behaviour*) NEAR/2 (training* OR treatment* OR therapy OR therapies) OR ‘cognitive therapy’/exp OR (cognitive NEAR/3 (therapy OR therapies)) OR ‘acceptance and commitment therapy’/exp OR ‘cognitive remediation therapy’/exp OR ‘group therapy’/exp OR (group OR community) NEAR/2 (therapy OR therapies OR treatment* OR psychotherapy OR intervention) OR “Domestic Abuse Intervention Project” OR “Duluth Model” OR ‘anger management therapy’/exp OR ‘anger management’ OR ‘psychosocial rehabilitation’/exp OR psychosocial) AND (‘recidivism’/exp OR recidivis* OR repeat NEAR/2 offender* OR recurrence OR ‘repeated violence’ OR reassault OR ‘recurrence risk’/exp)) NOT (‘animal’/exp NOT (‘animal’/exp AND ‘human’/exp))

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Note

1. We conceptualize intimate partner violence (IPV) and abuse as action(s) among those who were previously or are currently romantically interested/involved, which intend to control the will, existence, well-being, or actions of another person. Such behavior may or may not cause harm, can occur once or be part of a pattern, and may occur within coupled or group (i.e., throuple) relationships. However, many of the outcome variables explored in the studies reviewed are bound to acts of criminality, which in the U.S. system is referred to as domestic violence (DV). Therefore, throughout this article, we use IPV in a broader sense and DV when referring to specific criminalized forms of IPV and/or the associated court adjudication.

References


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**Lauren Yaeger**, MA, MLIS, is a clinical and systematic review librarian at Becker Medical Library at Washington University School of Medicine in St. Louis. Lauren spent over 8 years as the point of care clinical librarian at St. Louis Children’s Hospital where she was embedded in clinical rounds, ethics, UBJPTs, journal clubs, and the residency program and is now one of Becker’s systematic review librarians and is a creator and co-instructor of the Designing Search Strategies for Systematic Reviews, an annual hands-on workshop for librarians.